WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

a) input means for inputting a continuous image signal;

b) detection means for detecting a frame change in an image by comparing the image signal input by said input means with a reference image signal; and

c) storage means for updating/storing the image signal input by said input means as the reference image signal in units of frames in accordance with an output from said detection means.

2. An apparatus according to claim 1, wherein the reference image signal is a newest change image signal obtained when a newest change of frame changes in the past is detected.

3. An apparatus according to claim 1, further comprising output means for outputting the image signal outside in units of frames in accordance with an output from said detection means.

4. An apparatus according to claim 3, wherein said output means outputs the image signal to an external unit via a communication path.

5. An apparatus according to claim 1, wherein said detection means calculates a pixel value difference between each pair of corresponding pixels using the image signal and the reference image signal, and determines, if a sum total of pixel value differences in an entire frame is larger than a predetermined threshold value, that a frame change has occurred.

6. An apparatus according to claim 1, wherein said detection means calculates a pixel value difference between each pair of corresponding pixels using the image signal and the reference image signal, determines, if a corresponding pixel value difference is larger than a first threshold value, that a pixel change has occurred, and determines, if the number of pixels having undergone changes in an entire frame is larger than a second threshold value, that a frame change has occurred.

7. An apparatus according to claim 6, wherein said detection means determines that there is no change in a subject image, even if a pixel value difference corresponding to the subject pixel is larger than the first threshold value, in accordance with a detection result concerning a plurality of pixels adjacent to the subject pixel.

8.   An apparatus according to claim 1, wherein said detection means divides the image signal and the reference image signal into a plurality of blocks, calculates the sum total of pixel value differences

5   between corresponding pixels using the image signal and the reference image signal in units of blocks, determines, if the sum total is larger than the first threshold value, that the corresponding block has undergone a change, and determines, if the number of

10 blocks having undergone changes in the entire frame is larger than the second threshold value, that a frame change has occurred.

9.   An apparatus according to claim 1, wherein

15 said detection means divides the image signal and the reference image signal into a plurality of blocks, calculates a pixel value difference between each pair of pixels corresponding to the image signal and the reference image signal, determines, if each pixel value

20 difference is larger than the first threshold value, that a corresponding pixel has undergone a change, determines, if the number of pixels having undergone changes in the block, that the corresponding block has undergone a change, and determines, if the number of

25 blocks having undergone changes in an entire frame is larger than a third threshold value, that a frame change has occurred.

10. An apparatus according to claim 9, wherein said detection means determines that there is no change in a subject image, even if a pixel value difference corresponding to the subject pixel is larger than the first threshold value, in accordance with a detection result concerning a plurality of pixels adjacent to the subject pixel.

11. An apparatus according to claim 1, wherein said detection means forms a differential image signal by performing differential processing for the image signal, and detects a frame change on the basis of the differential image signal.

12. An apparatus according to claim 1, wherein said image processing apparatus is applied to a video conference system.

13. An apparatus according to claim 1, wherein said image processing apparatus is applied to a monitoring system.

14. An image processing apparatus comprising:

a) input means for inputting a continuous image signal;

b) change component extraction means for extracting change components between images by

comparing the image signal input by said input means with a reference image signal;

c) erroneous extraction correction means for detecting and removing an erroneously extracted change component from the change components extracted by said change component extraction means; and

d) image change discrimination means for discriminating an image change in the image signal on the basis of the change component corrected by said erroneous extraction correction means.

15. An apparatus according to claim 14, wherein the reference image signal is a newest change image signal obtained when a newest change of image changes in the past is detected.

16. An apparatus according to claim 14, further comprising storage means for updating/storing the image signal as the reference image signal in accordance with an output from said image change discrimination means.

17. An apparatus according to claim 14, further comprising output means for outputting the image signal outside in accordance with an output from said image change discrimination means.

18. An apparatus according to claim 14, wherein said change component extraction means forms a differential image signal by performing differential processing for the image signal, and detects the change components on the basis of the differential image signal.

19. An apparatus according to claim 14, wherein said image processing apparatus is applied to a video conference system.

20. An apparatus according to claim 14, wherein said image processing apparatus is applied to a monitoring system.

21. An image processing apparatus comprising:

a) input means for inputting a continuous image signal;

b) input image storage means for storing the image signal input by said input means;

c) detection means for detecting an image change by comparing the image signal input by said input means with a reference image signal; and

d) reference image storage means for updating/storing the image signal input by said input means as the reference image signal in accordance with an output from said detection means,

wherein said input image storage means and said reference image storage means are constituted by two image storage means, whose roles are switched in accordance with an output from said detection means.

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22. An apparatus according to claim 21, further comprising output means for outputting the image signal in said input image storage means outside in accordance with an output from said detection means.

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23. An image processing method comprising:

a) the input step of inputting a continuous image signal;

b) the detection step of detecting a frame change

15 in an image by comparing the image signal input in the input step with a reference image signal; and

c) the storage step of updating/storing the image signal input in the input step as the reference image signal in units of frames in accordance with an output

20 in the detection step.

24. An image processing method comprising:

a) the input step of inputting a continuous image signal;

25 b) the change component extraction step of extracting change components between images by

comparing the image signal input in the input step with a reference image signal;

    c)   the erroneous extraction correction step of detecting and removing an erroneously extracted change component from the change components extracted in the change component extraction step; and

    d)   the image change discrimination step of discriminating an image change in the image signal on the basis of the change component corrected in the erroneous extraction correction step.